

METHODS AND SYSTEMS FOR TOTAL FOCUS DEVIATION  
ADJUSTMENTS ON MASKLESS LITHOGRAPHY SYSTEMS

ABSTRACT OF THE DISCLOSURE

A method and system for correcting optical aberrations in a maskless lithography system. Adjusters move individual spatial light modulators (SLMs) in an SLM array so that the surface of the SLM array deviates from a flat plane. The deviation compensates for aberrations in the lithography system, such as total focus deviation. In an embodiment, an individual SLM can be tilted, bent, and/or have its elevation changed. Multiple SLMs in the SLM array can move in different ways depending on the compensation to be made. The adjusters can be either actively or passively controlled. The method may be performed only during initial setup of the maskless lithography system, periodically as needed for maintenance of the lithography system, or prior to each exposure in the lithography system.